CLIMATE FUND FOR WATER AND ENERGY EFFICIENCY PBCs

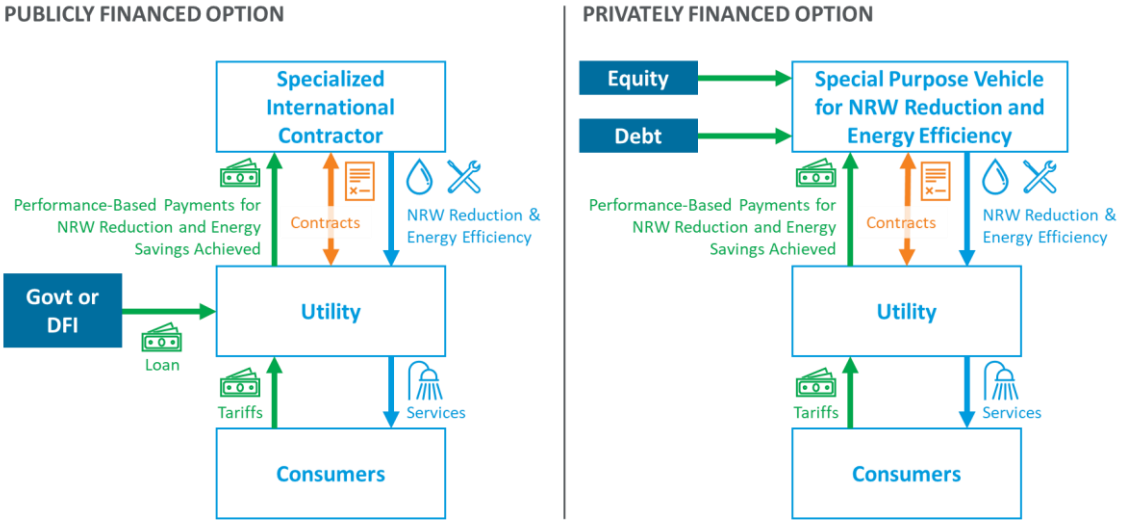
WE MUST STOP WASTE OF WATER AND ENERGY IN WATER UTILITIES

Globally, **126 billion cubic meters** of water are lost every year. Valued conservatively at 0.31 per cubic meter, the value of lost water amounts to US$ 39 billion per year. If global NRW was reduced by one third, equivalent to **115 cubic meters per day**, the saved water would be enough to supply around 800,000 million people in the same period and result in financial savings of US$ 13 billion annually.[1] Reducing NRW also results in energy savings. For example, in the Caribbean **200,000 MWh** of energy are wasted every year due to Non-Revenue Water (NRW), enough to power more than 30,000 households. Most utilities and governments have not been effective at addressing the NRW and energy efficiency challenge.

Performance-Based Contracts (PBC) for NRW and Energy Efficiency (EE) have proven to be a successful alternative to tackle the problem in many countries, but their use has not been mainstreamed yet in many regions including; Latin America and the Caribbean, Asia, and the Middle East.

What is a PBC for NRW and Energy Efficiency?

An NRW PBC is a contract for outsourcing technical, commercial, and construction activities related to non-revenue water reduction, while providing the contractor with incentives to achieve the desired results. Unlike conventional NRW reduction contracts in which contractors are paid based on inputs (for example, number of connections replaced), NRW-PBCs pay the contractor for outputs, such as amount of water saved or number of customers receiving 24/7 service.[2] PBCs can be financed publicly or by private investors not necessarily involved with the government or the utility.



Why PBCs for NRW and Energy Efficiency?

PBCs for NRW are a proven-to-work business arrangement to effectively reduce NRW levels and improve energy efficiency. Utilities maintain control of the service provision while leveraging the know-how and experience of specialized NRW consultants.

The PBC for NRW model is proven and has presented outstanding results for some countries.

Bangkok. Thailand — 2000-2004

56.5 cost (US$ m)	**165** water saved (MLD)	**170**	capital expenditure savings (US$ m)
		2	million additional people served

New Providence, Bahamas — 2012-2020

83 cost (US$ m)	**17** water saved (MLD)	**10**	cashflow/year (US$ m)
		0.6	profit saved per m³ (US$)

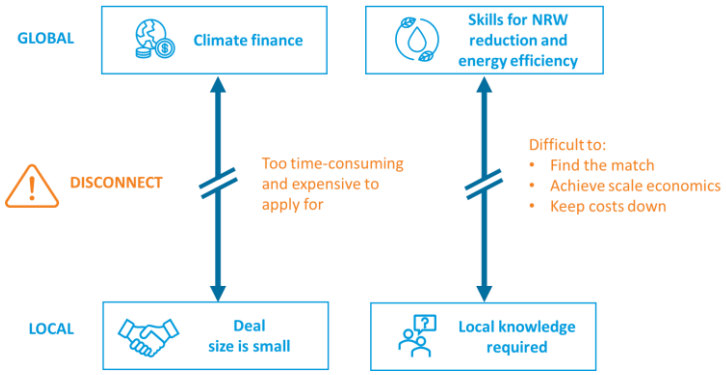
[1] Kingdom, Bill, Jemima Sy, and Gerhardus Soppe. 2018. "The Use of Performance-Based Contracts for Nonrevenue Water Reduction: Output of the Global Program on Developing Good PBC Practices for Managing NRW." Washington, D.C., World Bank.

[2] R. Liemberger, A. Wyatt; Quantifying the global non-revenue water problem. Water Supply 1 May 2019; 19 (3): 831–837. doi: https://doi.org/10.2166/ws.2018.129

Barriers for mainstreaming NRW and Energy Efficiency PBCs Globally

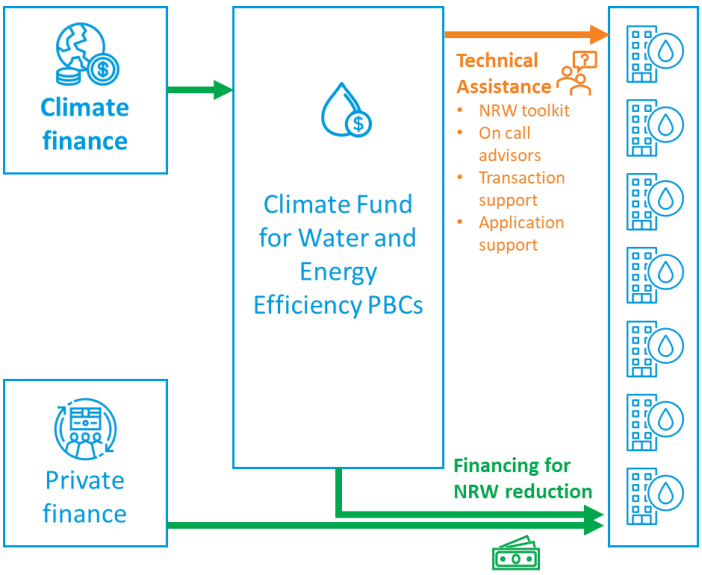
Although a proven mechanism, the PBC model faces significant barriers and challenges that hinder its extended implementation for tackling the NRW and energy efficiency challenge:

- **Lack of technical capacity in utilities:** PBCs are a complex model to structure and, often, the required skills are missing in utilities and governments
- **Weak governance and financial frameworks:** NRW and EE projects for most utilities tend to be small in value (below USD $10 million). Therefore, transaction costs for developing PBCs are high, making projects financially unviable before they even start
- **Limited fiscal space:** Many governments in developing nations have limited fiscal space to promote and finance these initiatives



DESIGNING A CLIMATE FUND FOR WATER AND ENERGY EFFICIENCY PBCs

A funding platform can overcome these barriers. The fund would assist governments in preparing and bidding out PBCs designed for water and energy efficiency in water utilities. It would create standard contracts, provide technical assistance, and mobilize climate finance. Climate finance would leverage public and private finance.



The funding to the fund will raise **climate finance** at the regional level. Water savings and energy efficiency initiatives are eligible for climate finance.

- **Mitigation:** NRW reduction improves energy efficiency because less energy is required per m^3 of water sold
- **Adaptation:** Reducing NRW improves climate resilience in regions that are vulnerable to water scarcity

The fund could apply for concessional finance to the Green Climate Fund and other climate financiers. The regional scale of the fund justifies the effort needed to request this type of financing.

This finance will be provided to utilities and projects as **reimbursable project preparation grants** and **concessional debt.** The concessional debt will be used as a risk cushion to attract commercial investors to NRW programs.

Early-stage product: Technical Assistance

NRW Toolkit: set of tools that allows governments and utilities to identify and assess opportunities for NRW reduction in a structured and standardized approach

On-call Advisors: provision of advisory services to structure business arrangements to tackle the NRW challenges for each location

Transaction support: specialized team of advisors supporting the design and structuring of the necessary business arrangements

Application support: specialized team of advisors assisting potential investees in submitting the application to the fund

Investment-stage products: Project Finance

Financing for project development: reimbursable grants for developing ready-to-invest projects for NRW reduction

Coordination with other investors: effective intermediary services at a high level, leveraging additional commercial financing through the fund's resources

De-risking approach in financing: financing could be structured to de-risk projects. For example, debt that could be forgiven if the project is not successful mitigates risk arising from imperfect knowledge of underground asset conditions.

THE ROLE OF DEVELOPMENT FINANCE INSTITUTIONS (DFI)

Development finance institutions could host a fund

WHY?

- **Development finance institutions** have the capacity and connections to mainstream the fund across multiple countries. Pooling investors at the fund level needs an outstanding relationship with other development organizations and investors.
- **Trusted by governments, utilities, and service providers,** development finance institutions are a reliable and frequent partner for national governments and their utilities and are a sign of project credibility to contractors. Guaranteeing a constant and effective cooperation is critical for the success of the fund. DFIs are well-placed to work alongside beneficiaries and stakeholders in the region where they are active.
- **Leveraging of their role** would allow the standardization of the preparation and investment process. Therefore, the involvement of DFIs generates efficiencies and economies of scale, considering their ample reach.

BENEFITS OF IMPLEMENTING THE FUND

Reduce transaction costs by raising finance at the regional level, then standardizing transactions at the utility level

Engage a specialized team that can work with local utilities

Maximize private finance by using climate finance as a risk cushion

Leverage the ample reach and trustworthiness of development finance institutions

IMPACTS OF IMPLEMENTING THE FUND

Improved Resilience	Improved Service	Improved Sustainability
Reduction of greenhouse gas emissions Efficient use of scarce water resources	Reduction of leaked water More customers served for longer hours Better water quality	Reduced operating costs for utilities Reduced capital expenditures for utilities Increased flow of public funds to other social programs due to reduced government subsidies to utilities

SAVE THE PLANET SAVE WATER SAVE MONEY